

**Table 1.** Physician characteristics

	Total physicians (n = 697) n (%)	Clinical oncologists (n = 560) n (%)	Palliative care Physicians (n = 87) n (%)
Age (years)			
Mean $\pm$ S.D.	45 $\pm$ 8.2	45 $\pm$ 8.2	43 $\pm$ 8.1
Range	28–69	28–68	31–69
Gender			
Male	639 (92)	531 (95)	76 (87)
Female	43 (6)	27 (5)	11 (13)
Religion			
None	521 (75)	441 (80)	49 (56)
Buddhism	108 (16)	87 (16)	9 (10)
Christianity	47 (7)	18 (3)	24 (28)
Others	13 (2)	3 (1)	4 (5)
Oncology experience (years)			
Mean $\pm$ S.D.	16 $\pm$ 8.1	16 $\pm$ 7.9	12 $\pm$ 7.6
Range	0.5–40	0.5–40	1.0–30
Involvement in end-of-life care during the past year			
Percentage of time used for palliative care			
<25	502 (72)	452 (81)	13 (15)
25–50	103 (15)	91 (16)	9 (10)
51–75	14 (2)	7 (1)	7 (8)
>75	67 (10)	9 (2)	58 (67)
Percentage of patients with an estimated survival time of less than 6 months			
<25	466 (67)	423 (76)	11 (13)
25–50	116 (17)	105 (19)	6 (7)
51–75	31 (4)	21 (4)	8 (9)
>75	70 (10)	8 (1)	61 (71)
Number of patients who died			
<5	222 (32)	196 (35)	3 (4)
5–25	374 (54)	344 (62)	16 (19)
26–50	42 (6)	16 (3)	24 (28)
>50	47 (7)	3 (1)	43 (50)

Note: We included 50 missing values among total physicians whose practice settings were unknown. S.D.: standard deviation.

**Table 2.** Prevalence of burnout and psychiatric morbidity

	Total physicians (n = 697) (%)	Clinical oncologists (n = 560) (%)	Palliative care physicians (n = 87) (%)	$\chi^2$	P value
High level of Emotional Exhaustion	22	23	15	2.81	0.09
High level of Depersonalization	11	10	8	0.19	0.66
Low level of Personal Accomplishment	62	65	53	4.03	0.05
Psychiatric Morbidity	20	21	12	3.80	0.05

Note: We included 50 missing values among total physicians whose practice settings were unknown.

**Table 3.** Association between high levels of burnout and psychiatric morbidity: multivariate logistic regression analysis (n = 697)

	Psychiatric morbidity		
	OR	95%CI	P value
High level of Emotional Exhaustion	4.41	2.70–7.20	<0.01
High level of Depersonalization	1.49	0.79–2.79	0.21
Low level of Personal Accomplishment	2.32	1.43–3.78	<0.01

OR: odds ratio; CI: confidence interval.

had the lowest score (mean  $\pm$  S.D., 2.7  $\pm$  1.0) and was significantly associated with all the total scores of MBI and GHQ-12: emotional exhaustion

( $p < 0.01$ ), depersonalization ( $p < 0.01$ ), personal accomplishment ( $p < 0.05$ ), and GHQ-12 ( $p < 0.01$ ). Though all the total adjusted  $R^2$  values presented in Table 4 were very low, the best performing model is that for personal accomplishment (total adjusted  $R^2 = 0.18$ ). Being male ( $p < 0.05$ ), being little involved in care for patients who died during the past year ( $p < 0.05$ ), having greater confidence in having adequate resources in physical care ( $p < 0.01$ ), having greater confidence in the assessment of patient anxiety and depression ( $p < 0.01$ ) and assessment of patient ability to make decisions ( $p < 0.05$ ) were significantly associated with higher personal accomplishment. Being a clinical oncologist was significantly associated with

**Table 4.** Factors associated with burnout and stress: multivariate linear regression analysis ( $n = 697$ )

	Emotional Exhaustion	Depersonalization	Personal Accomplishment	GHQ-12 total scores
	$\beta$	$\beta$	$\beta$	$\beta$
Age (years)	-0.14	-0.11	-0.01	0.01
Gender <sup>a</sup>	0.05	0.00	-0.08 <sup>e</sup>	0.04
Practice setting <sup>b</sup>	-0.13 <sup>e</sup>	0.00	0.04	-0.13 <sup>e</sup>
Strength of religious belief <sup>c</sup>	0.07	0.03	0.08	0.09 <sup>e</sup>
Oncology experience (years)	0.08	0.03	0.07	-0.07
Involvement in End-of-life care during the past year <sup>d</sup>				
Percentage of time used for palliative care	0.01	-0.11	-0.02	-0.05
Percentage of patients with an estimated survival time of less than 6 months	0.02	-0.02	0.04	0.10
Number of patients who died	0.09	0.12	-0.13 <sup>e</sup>	0.06
Confidence in the physical care of patients <sup>c</sup>				
Knowledge and skill (pain)	0.00	0.01	0.09	-0.04
Knowledge and skill (physical symptoms)	-0.03	-0.01	0.08	-0.01
Having trained (physical management)	0.03	-0.01	-0.03	-0.05
Having adequate resources	-0.03	0.09	0.16 <sup>f</sup>	-0.03
Ability to make a prognosis	0.04	0.01	0.04	-0.04
Confidence in the psychological care of patients <sup>c</sup>				
Assessment (patient anxiety and depression)	-0.02	-0.02	0.17 <sup>f</sup>	0.06
Knowledge and skill (psychotropics and psychotherapy)	0.06	-0.02	-0.06	-0.03
Having adequate resources	-0.06	-0.01	-0.10	0.01
Assessment (patient ability to make decisions)	-0.03	-0.05	0.13 <sup>e</sup>	-0.09
Having sufficient time to communicate with patients	-0.16 <sup>f</sup>	-0.23 <sup>f</sup>	0.10 <sup>e</sup>	-0.15 <sup>f</sup>
Total R <sup>2</sup>	0.07	0.09	0.21	0.09
Total adjusted R <sup>2</sup>	0.04	0.07	0.18	0.06

$\beta$ : standardized coefficient.

<sup>a</sup>Coded as: 0 = Male; 1 = Female.

<sup>b</sup>Coded as: 0 = Clinical Oncologists; 1 = Palliative Care Physicians.

<sup>c</sup>Possible range 1–5. Higher scores indicate greater strength or confidence.

<sup>d</sup>Possible range 1–4. Higher scores indicate greater involvement.

<sup>e</sup>Statistically significant variables ( $p < 0.05$ ).

<sup>f</sup>Statistically significant variables ( $p < 0.01$ ).

emotional exhaustion ( $p < 0.05$ ) and total scores of GHQ-12 ( $p < 0.05$ ).

## Discussion

This is the first cross-sectional nationwide survey to determine the prevalence of burnout and psychiatric morbidity among physicians engaged in end-of-life care for cancer patients in Japan. Based on the results of present study, several findings emerged. First, 22% of the respondents had a high level of emotional exhaustion, 11% had a high level of depersonalization, 62% had a low level of personal accomplishment, and 20% had psychiatric morbidity. Second, clinical oncologists showed a significantly higher prevalence of psychiatric morbidity than palliative care physicians (21% versus 12%). Third, physician confidence in having sufficient time to communicate with patients was the factor most strongly associated with burnout.

Before proceeding any further with this Discussion section, we would like to present several critical limitations of this study to help the readers' understanding of our interpretation of the results. First, there was a sample bias. The response rate

was relatively low (49.6%), so our prevalence may not be truly representative. Because the response rate of the clinical oncologists (43%) was lower than that of the palliative care physicians (67%) and the clinical oncologists showed a higher prevalence, physicians with high levels of burnout may not have responded to our study. Second, this study was a secondary analysis, so the number of factors included as independent variables was limited and neither the variance in burnout nor the relations among burnout, psychiatric morbidity and individual factors could be fully explained. Third, this was a cross-sectional study, so any causality between the prevalence and associated factors could not be determined.

In previous studies examining burnout in oncologists [7–13] and general physicians [30,31,14], high levels of emotional exhaustion (23–53% and 19–53%, respectively), high levels of depersonalization (13–31% and 22–64%, respectively), and low levels of personal accomplishment (21–48% and 13–31%, respectively) were observed. The present study showed a lower prevalence of depersonalization and a higher prevalence of diminished personal accomplishment, compared with the results of previous studies.

Depersonalization is associated with suboptimal patient care [14,16]; therefore, its lower level among the physicians in this study may not have a strong impact on end-of-life care.

On the other hand, the prevalence of a low level of personal accomplishment was relatively high and was significantly associated with psychiatric morbidity in the present study. Our results showing that personal accomplishment reduces the risk of psychiatric morbidity were consistent with a previous nationwide cross-sectional study [13,32]. The role of personal accomplishment is complicated: it is believed to prevent emotional exhaustion and depersonalization [1,33], whereas at a high level, it predicted higher levels of stress in a longitudinal study [34]. According to our results, improving physician confidence in assessing the mental state of patients (anxiety, depression, decision making ability) and having adequate resources for the physical care of patients may prevent a diminished sense of personal accomplishment. However, assessing a patient's mental state is difficult for oncologists because they receive little training on assessing psychological distress [35,36], so further education is needed. In addition, clarifying the physician role has been suggested as improving a diminished sense of personal accomplishment [5]. Therefore, we recommend that mental health professionals be consulted to provide education on psychological distress and to clarify the roles of physicians. In Japan, consultation teams for palliative care that include a palliative care specialist and a psychiatrist as essential members have started to receive expanded coverage under healthcare insurance since 2002; further studies are required to see whether this system will improve the confidence of physicians and prevent diminished personal accomplishment in Japan.

The overall psychiatric morbidity in this study was 20%. Since the prevalence of psychiatric morbidity in the general population of Japan is 16.5% [37], physicians engaged in end-of-life care for cancer patients were not considered to have a particularly high prevalence of psychiatric morbidity. Furthermore, psychiatric morbidity in this study was lower than that in previous studies on burnout in oncologists (25–32%) [9–13] and was nearly equal to recent data on UK doctors who were not oncologists (17–18%) [34] using the same GHQ-12 cut-off score. On the other hand, considering that the non-responders showed a higher psychiatric morbidity in a previous study [38], we might have underestimated the prevalence in the present study owing to our low response rate.

The palliative care physicians showed much lower levels of burnout and psychiatric morbidity than the clinical oncologists, and this result was similar to those of previous studies in which physicians and nurses working in hospices had lower stress levels than those working in oncology settings [39–41]. On the other hand, a previous

study in the UK [12] showed nearly the same level of psychiatric morbidity in these two practice settings. As indicated in the limitations of this study, we could not investigate the job stress factors. Clinical oncologists reported feeling more overloaded and being involved with treatment toxicity, which factors were significantly associated with psychiatric morbidity [12]. Furthermore, situational factors such as workload, control, reward, community, fairness, and values have been said to be more importantly correlated with burnout than individual factors [2,42,43]. These job stress and situational factors may be more associated with the prevalence of burnout than involvement in end-of-life care, and these factors might be related to the Japanese palliative care system in 2000. In Japan, healthcare insurance has supported dissemination of specialized palliative care services since 1991, the number of palliative care units having dramatically increased from only 5 in 1991, to 123 in 2004 [44].

Burnout was associated with physician confidence, especially confidence in the psychological care of patients, rather than involvement in end-of-life care. Among the factors, confidence in having sufficient time to communicate with patients was the most strongly associated factor. To relieve physician burnout, ensuring sufficient time to communicate with patients or the development of clinical aids to help communication within a brief time are promising strategies. Communication skills training would not help physicians to have sufficient time but may help them acquire good communication skills, minimizing the need for more time. Physicians who felt insufficiently trained or who were not confident of their communication skills were more likely to have a low sense of personal accomplishment [7,12,13]. Despite the effectiveness of communication skills training in Western countries [45,46], our preliminary study showed that while oncologists became more confident of their communication skills, their level of emotional exhaustion also increased after training [47]; further studies on communication skills training are needed in Japan.

In conclusion, a low level of personal accomplishment was relatively high among Japanese physicians compared with previous studies. Insufficient confidence in the psychological care of patients was associated with physician burnout rather than involvement in end-of-life care.

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# Multifaceted psychosocial intervention program for breast cancer patients after first recurrence: Feasibility study

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## Abstract

We developed a novel multifaceted psychosocial intervention program which involves screening for psychological distress and comprehensive support including individually tailored psychotherapy and pharmacotherapy provided by mental health professionals. The purpose of the present study was to investigate the feasibility of the intervention program and its preliminary usefulness for reducing clinical psychological distress experienced by patients with recurrent breast cancer. The subjects who participated in the 3 months intervention program completed psychiatric diagnostic interview and several self-reported measures regarding psychological distress, traumatic stress, and quality of life. The assessments were conducted before the intervention (T1), after the intervention (T2), and 3 months after the intervention (T3). A total of 50 patients participated in the study. The rates of participation in and adherence to the intervention program were 85 and 86%, respectively. While the proportion of psychiatric disorders at T2 (11.6%) was not significantly different from that at T1 (22.0%) ( $p = 0.15$ ), the proportion of that at T3 (7.7%) had significantly decreased compared with that at T1 ( $p = 0.005$ ). The novel intervention program is feasible, is a promising strategy for reducing clinically manifested psychological distress and further controlled studies are warranted.

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## Introduction

Because cancer is a life-threatening disease, its psychological impact on patients has been an important aspect of clinical oncology. Derogatis *et al.* found that almost half of all cancer patients had been diagnosed as having a psychiatric disorder, and that most of them had an adjustment disorder and/or major depression [1]. Other studies have consistently indicated that adjustment disorders and major depression are common psychiatric disorders among cancer patients [2–4] and are more common in patients with advanced cancer [2,5]. All the previously cited studies have indicated that more than 40% of the breast cancer patients who experienced first recurrence suffer from an adjustment disorder and/or major depression [3,6] and these findings as well as other previous results

[7,8] suggest that the impact of cancer recurrence on psychological well-being is serious.

Several studies have indicated that psychological distress can lead to serious and far-reaching negative consequences in patients with advanced cancer, including reducing their quality of life [9] and causing severe suffering [10], a desire for early death, requests for physician-assisted suicide and/or euthanasia [11,12], suicide [13], as well as psychological distress in family members [14]. Maintaining psychological well-being is thus an important issue especially among advanced cancer patients. On the other hand, there are several issues to be overcome in order to reduce psychological distress among cancer patients. For example, under-recognition of the psychological distress, especially depression, experienced by cancer patients is repeatedly reported [15,16]. In addition, a

previous study demonstrated that even when screening for psychological distress was coupled with feedback the results of the screening alone did not seem to contribute to improving the patient's outcome in the oncology setting [17]. Similarly it was reported that the psychosocial intervention by a social worker in combination with screening for psychological distress failed to reduce psychological distress among newly diagnosed breast cancer patients [18]. Lastly recent systematic reviews have suggested that psychotherapy alone does not appear to be sufficiently effective for reducing psychological distress among advanced cancer patients [19,20].

Several recent reports have suggested promising strategies, such as integrated screening programs. These consist of an intervention program that provides pharmacotherapy by oncologists based on antidepressant algorithms [21,22] or psychological intervention delivered by the cancer nurse under the supervision from a consultant psychiatrist, for those patients who have screened positive [23]. In any event, interventions for advanced cancer patients should require a powerful strategy and the previous findings suggest that an integrated program that combines screening for psychological distress with subsequent provision of appropriate treatment and/or intervention seems to be one of the promising strategies.

Based on these findings, we developed a multifaceted psychosocial intervention program which involves screening, psychiatric evaluation, and comprehensive support including individually tailored psychotherapy and pharmacotherapy provided by mental health professionals for cancer patients [24]. The purpose of the present study were: (1) to investigate the feasibility of this novel intervention program and (2) to examine its preliminary usefulness for reducing clinical psychological distress among breast cancer patients who have experienced first recurrence.

## Methods

### Patients

The subjects were consecutively recruited from outpatient populations of the Oncology-Hematology Division of the National Cancer Center Hospital East (NCCHE) in Japan from January 2001 to January 2002. The eligibility criteria for the study were as follows: (1) histologically, cytologically or clinically proven first recurrence of breast cancer; (2) female, age 20 years or older; (3) informed of recurrent diagnosis; (4) one to six months after the disclosure of recurrence; (5) an estimated life expectancy exceeding six months; (6) follow-up at the Oncology-Hematology Division of the NCCHE; (7) a performance status (PS) of from 0

to 3 according to the Eastern Cooperative Oncology Group criteria. The exclusion criteria were: (1) cognitive impairment; (2) too ill to participate; (3) being treated for any psychiatric disorder by mental health professionals; (4) unable to speak and understand Japanese.

This study was approved by the Institutional Review Board and the Ethics Committee of the National Cancer Center of Japan and was conducted in accordance with the Helsinki Declaration. Written informed consent was obtained from each subject before enrollment into this study.

### Study procedures

After written consent was obtained from eligible patients, a psychiatric diagnosis for study outcome (see the outcome measures) was made and socio-demographic data were obtained in a structured interview by a research fellow who was trained for this study (T1). The subjects also completed several self-reported questionnaires (see the outcome measures). After that, a multifaceted psychosocial intervention program was provided, including the screening, evaluation interview, and individually tailored intervention. The psychiatrists who provided the intervention were blinded to any subjects' baseline data, including the psychiatric diagnosis at baseline (T1). After the intervention, the follow-up assessment was conducted for study outcome at T2 and T3.

### Intervention—multifaceted psychosocial intervention program

The intervention program included multifaceted components (Table 1) and several steps (Figure 1). The program is described in detail elsewhere [25]. Briefly, intervention components consisted of provision of the information material (booklet) for cancer patients, a self-reported brief instrument for screening clinically manifested psychological distress [26], an interview for assessing the patient's physical, psychiatric and psychosocial issues, pharmacotherapy algorithm for major depression [27], and a pharmacotherapy and psychotherapy manual for managing psychological distress for cancer patients. Physical distress items evaluated in the interview were extracted from the MD Anderson Symptom Inventory [28]. Regarding psychiatric diagnosis, the Structured Clinical Interview for DSM-IV (SCID) was included in the interview to evaluate the subjects for major depressive disorder, post traumatic stress disorder (PTSD), and adjustment disorders [29]. The interview form and treatment manual are developed for psychiatrists in residency level. These manuals in Japanese are available from the authors upon request.

As shown in Figure 1, a participant was provided with a booklet and screened for his/her

Table 1. Components of the multifaceted psychosocial intervention

Component	Contents and purpose
Booklet	Medical and psychosocial information for psycho-education
Screening (Distress and Impact Thermometer)	2-item brief self-reported questionnaire for screening clinical psychological distress
Interview form	Semi-structured interview for assessing patient's background, physical symptoms, psychiatric diagnosis, and social support
Pharmacotherapy manual	General attention and practical issues (half-life, metabolism, adverse events, drug-drug interaction, adjuvant use for cancer pain, etc.) for psychotropic medication for cancer patients
Pharmacotherapy algorithm for major depression in advanced cancer patients	Algorithm in consideration of status of advanced cancer such as administration route, estimated prognosis, etc.
Psychotherapy manual	Communication skills and bed side manner for interviewing cancer patients Common psychotherapeutic techniques (psycho-education, crisis intervention, supportive psychotherapy, behavioral therapy, etc.) Special attention for caring for terminally ill cancer patients Defense mechanism frequently observed in cancer patients and management of patients in difficult situations

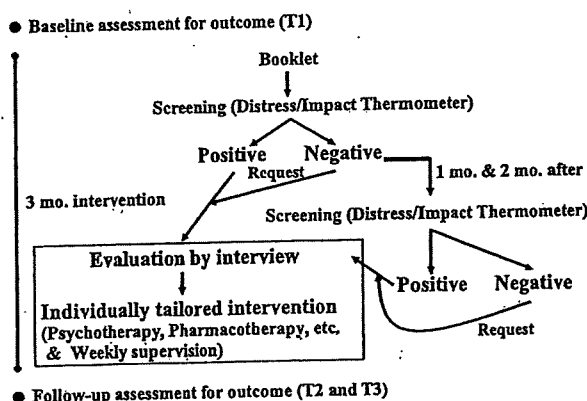


Figure 1. Procedure of the multifaceted psychosocial intervention program and outcome measurements

psychological distress on a monthly basis for a maximum of three times. A patient who screened positive or who screened negative but requested for the following interview was evaluated by the psychiatrist using the interview form. We provided the intervention with the subjects who screened negative but requested the follow-up because a patient's needs can be one of the important factors in determining the morbidity outcome of cancer [30]. After the interview, the patient status was summarized and individually tailored treatment based on the treatment manual was provided by the psychiatrist at residency level. The interview form was designed to be able to clarify patient's uncontrolled physical symptoms, psychosocial issues (e.g. concerns, lack of social support, relationship to medical staff, psychiatric diagnosis), and patient's needs regarding the problems and preferences as to the treatment. Then, just as in actual clinical practice, psychotherapy and/or pharmacotherapy were provided to each patient with flexibility. In most cases, each patient's preference and need for therapy was considered and an

appropriate therapy was selected. Regarding psychotherapy, most patients were provided with brief supportive counseling and an additional technique, such as relaxation was also used depending on each patient's situation and preference. The intervention program also included the feedback of information on uncontrolled physical symptoms to patient's oncologists, and sometimes a family meeting was arranged to manage the family's distress. In addition, weekly supervision of treatment procedure was provided to the psychiatric resident by the faculty psychiatrists (T.A., Y.U.). If there was any necessity for continuous psychiatric follow-up after the end of the intervention, this was provided by the clinical staff of the Psychiatry Division.

Outcome measures

Feasibility

Feasibility of the current program was evaluated in terms of rates of participation and of adherence to the intervention program. The participation rate



was defined by the participation proportion of the eligible subjects who were informed of the purpose of the present study. We set over 50% of the participation rate as feasible. Adherence to the intervention program was defined by the proportion of the participants who completed the intervention at T2. We had set *a priori* that 50% or more of the participation rate and 80% or more of the completion rate would indicate good feasibility. In addition, the total amount of time and number of the interview sessions provided by psychiatrists at residency level and the amount of time of supervision by faculty psychiatrists were recorded. Furthermore, at the end of the study, unsolicited comments regarding the study were obtained from the participants by an interview.

#### Psychiatric diagnoses

Our primary outcome for this intervention was reduction in the prevalence of diagnosable psychiatric disorders. To evaluate this preliminary usefulness of the intervention program, the prevalence of psychiatric disorders commonly experienced by cancer patients (i.e. adjustment disorders, major depression, and PTSD) among all of the subjects was evaluated using the Structured Clinical Interview for DSM-IV (SCID) by a trained research fellow [29]. These assessment interviews were conducted before the intervention (baseline; T1), after the end of the intervention (4 months after the baseline interview; T2), and 3 months after the intervention (6 months after the baseline interview; T3). The trained research fellow was blinded to any intervention results such as screening and interview findings.

#### Psychological distress

Psychological distress was evaluated using the Profile of Mood States (POMS) and the Impact of Event Scale—Revised (IES-R). POMS is a 65-item self-rating scale measuring mood disturbance [31]. The POMS is a widely used, reliable measure of emotional distress that has been validated in cancer patients and demonstrated to be reliable for Japanese people [32]. The total mood disturbance (TMD) scale of the POMS, which is the sum of the emotional state subscales, was used. In addition, we measured the impact of being notified of the recurrence of the breast cancer on the patients by the IES-R, which is a 22-item self-rating questionnaire designed to assess the severity of three posttraumatic stress symptoms of intrusion, avoidance, and hyperarousal, and the Japanese version of the IES-R has been shown to be reliable [33,34]. These measures were completed at T1, T2 and T3.

#### Quality of life

Patients' QOL was assessed using the European Organization for the Research and Treatment of

Cancer (EORTC) QLQ-C30 and QLQ-BR23. The QLQ-C30 is a 30-item self-report questionnaire covering functional and symptom-related aspects of QOL for cancer patients [35]. The QLQ-BR23 is the breast cancer module, and consists of 23 questions assessing disease symptoms, adverse treatment events, body image, sexuality and future perspective [36]. The validity and reliability of the Japanese version of the EORTC QLQ-C30 and QLQ-BR23 have been confirmed [37,38]. These QOL measures were also completed at T1, T2 and T3.

#### Statistical analysis

To test the preliminary usefulness of the intervention program, the McNemar test was conducted to investigate differences in the proportions of diagnosable psychiatric disorders between T1 and T2 and between T1 and T3. As an additional analysis, changes of psychological distress and QOL assessed by POMS, IES-R, QLQ-C30 and QLQ-BR23 among the subjects with clinical psychiatric diagnosis at the baseline were investigated by repeated measures one-way ANOVAs because the important aims of this intervention program involve the early detection of those patients with clinical psychiatric disorders and to provide appropriate psychosocial intervention for them. When a statistical significance was observed, multiple comparisons were conducted using the Dunnett method to clarify which of the psychological distress at T2 or T3 differed from the psychological distress at T1.

All reported *P*-values are two-tailed. All statistical procedures were conducted using SPSS 12.0J software for Windows (SPSS Inc., 2003).

## Results

### Characteristics of the participants

During the study entry period, a total of 72 cases of recurrent breast cancer were newly diagnosed; 13 patients were found to be ineligible for enrollment in the study (receiving psychiatric consultation,  $n = 4$ ; no plan of the follow-up,  $n = 4$ ; too ill,  $n = 2$ ; others,  $n = 3$ ) among the remaining 59 eligible patients, 9 patients refused to participate in the study; thus, 50 patients ultimately participated in the study. The characteristics of the subjects are shown in Table 2. Regarding clinical psychiatric disorders, a total of 11 subjects (22%) met any psychiatric diagnoses ('Cases'). Regarding adjustment disorders, four subjects suffered from depressive mood, one from anxious mood, and five from both depressive and anxious moods.

Among the 50 subjects who participated in the study, 43 and 39 subjects completed the T2 and T3 follow-up, respectively. The reasons for drop out

**Table 2.** Baseline characteristics of the patients who participated in the study ( $n = 50$ )

		No. of patients (%)
Age (mean $\pm$ SD, range)		53 $\pm$ 10y, 32–72y
Education	> = 12y	40 (80)
Marital status	Married	42 (84)
Household size	Living alone	2 (4)
Children	Presence	43 (86)
Recurrence <sup>a</sup>	Bone	18 (36)
	Lymph node	15 (30)
	Lung	13 (26)
	Liver	10 (20)
	Skin	8 (16)
Current treatment <sup>a</sup>	Chemotherapy	31 (62)
	Hormone	24 (48)
	Radiation	1 (2)
Performance Status <sup>b</sup>	0	40 (80)
	1	8 (16)
	2	2 (4)
Psychiatric diagnoses <sup>c</sup>	Adjustment disorders	10 (20)
	Major depression	1 (2)
	PTSD <sup>d</sup>	1 (2)

<sup>a</sup> Multiple choice.

<sup>b</sup> As defined by Eastern Cooperative Oncology Group criteria.

<sup>c</sup> One subject had both adjustment disorder and PTSD.

<sup>d</sup> Posttraumatic stress disorder.

( $n = 7$ ) from the study between  $T1$  and  $T2$  were as follows: Refusal,  $n = 3$ ; Died,  $n = 2$ ; Too ill,  $n = 1$ ; Transferred to other hospital,  $n = 1$ . The reasons for drop out ( $n = 4$ ) from the study between  $T2$  and  $T3$  were as follows: Died,  $n = 3$ ; Refusal,  $n = 1$ .

#### Findings regarding the intervention

All of the subjects with psychiatric diagnoses were screened as positive at one of any 3 screening procedures. Three of 11 'Cases' did not receive psychiatric intervention because they said that they did not need any intervention. Among the 'Cases', 2 participants continued to be followed-up by the psychiatry department after the intervention. Among all subjects, a total of 23 subjects received some form of intervention (Psychotherapy,  $n = 23$  [Supportive psychotherapy,  $n = 23$ ; progressive muscle relaxation,  $n = 5$ ; crisis intervention,  $n = 3$ ; psycho-education,  $n = 2$ ]; and Pharmacotherapy,  $n = 4$  [Benzodiazepines,  $n = 3$ ; antidepressant,  $n = 1$ ]). Contents of intervention provided to the patients differed quite extensively depending on the patient's problems and preferences. For example, some patients received only one interview session because their needs were satisfied or problems were resolved (most of these patients did not have any diagnosable psychiatric disorder) while some others experienced 15 interviews session (see the feasibility). Most of these interventions were arranged and provided for the subjects when they

visited the hospital for regular follow-up, medical examination, and anticancer treatment.

#### Feasibility

The participation rate and adherence of the intervention program were 85% (50/59) and 86% (43/50), respectively. Among the participants who had some form of psychiatric diagnosis at  $T1$  ('Cases'), no one dropped out from the study. The number of the interview sessions, the amount of time used for individually tailored intervention by the psychiatry residents, and the amount of time consumed by the supervision were 105 times (mean 5; median 4; range 1–15), 5025 min (approximately 84h, corresponding with 1.7h per patient on average), and 2645 min (approximately 44 hours, corresponding with 0.9 hours per patient), respectively. Most of the participants found the intervention program convenient, but a couple of the participants commented that an opportunity of group psychotherapy or a patient group meeting as well as the individual psychotherapy would better satisfy a participant's needs.

#### Change in prevalence of mental disorders and in psychological distress and QOL

Among the subjects who completed the follow-up, the proportion of psychiatric diagnosis at  $T2$  and  $T3$  were 11.6% (adjustment disorders, 9.3%; major depression, 2.3%) and 7.7% (adjustment disorders, 7.7%), respectively. While the proportion of  $T2$  was not significantly different from that of  $T1$  ( $p = 0.15$ ), the proportion of  $T3$  was significantly less than that of  $T1$  ( $p = 0.005$ ). Given that all of the subjects who dropped out from the study developed clinical psychiatric disorders at  $T2$  or  $T3$  (worst case scenario),  $p$ -values of these comparison were 1.00 ( $T2$  vs  $T1$ ) and 0.65 ( $T3$  vs  $T1$ ), respectively. Interestingly, the 3 'Cases' at  $T1$  who did not receive intervention did not meet any psychiatric diagnosis both at  $T2$  and  $T3$ .

The change of psychological distress evaluated by POMS among the 11 'Cases' was borderline significant ( $p = 0.08$ ) while the total score of the IES-R was significantly reduced ( $p = 0.04$ ) (Table 3). A multiple comparison showed that the total score of the IES-R at  $T1$  was significantly reduced at  $T3$  ( $T1 > T3$ ,  $P = 0.02$ ). Most other measure including QOL did not change significantly while appetite loss was significantly improved. A multiple comparison showed that appetite loss at  $T1$  was significantly reduced at  $T3$  ( $T1 > T3$ ,  $P = 0.03$ ).

The measures regarding the psychological distress and QOL among the 39 completed subjects were not statistically significant (data not shown). In addition, those among the 23 patients who had received any kind of treatment were not statistically significant (data not shown).

**Table 3.** Longitudinal course of psychological distress in patients with clinical psychiatric diagnosis at baseline ('Cases';  $n = 11$ )

Psychological Distress	T1 Mean (SD)	T2 Mean (SD)	T3 Mean (SD)	F	p	Multiple comparison
Total mood disturbance (POMS)	45.9 (25.2)	40.8 (27.0)	30.1 (26.4)	2.88	0.08	—
Total score (IES-R)	24.7 (10.6)	19.8 (11.3)	17.3 (10.8)	3.93	0.04	T1 > T3
QLQ C-30						—
Global Health Status	60.6 (22.4)	63.6 (24.5)	56.1 (22.1)	0.79	0.43	—
Physical functioning	80.0 (16.6)	84.2 (14.1)	82.4 (14.7)	0.55	0.59	—
Role functioning	81.8 (21.7)	80.3 (20.8)	83.3 (16.7)	0.10	0.90	—
Emotional functioning	76.5 (12.8)	72.7 (24.5)	82.6 (16.0)	0.83	0.45	—
Cognitive functioning	71.2 (28.0)	75.8 (25.1)	78.8 (21.2)	0.19	0.18	—
Social functioning	83.3 (19.7)	78.8 (21.2)	84.9 (20.4)	0.80	0.46	—
Fatigue	40.4 (14.3)	34.3 (18.9)	38.4 (20.7)	0.70	0.51	—
Nausea and vomiting	21.2 (29.9)	7.6 (17.3)	4.6 (10.8)	1.93	0.17	—
Pain	21.2 (19.8)	18.2 (15.7)	27.3 (27.2)	1.31	0.29	—
Dyspnoea	27.3 (29.1)	18.2 (22.9)	24.2 (26.2)	0.76	0.48	—
Insomnia	12.1 (22.5)	15.2 (17.4)	21.2 (22.5)	0.86	0.44	—
Appetite loss	30.3 (23.4)	12.1 (22.5)	9.1 (21.6)	4.30	0.03	T1 > T3
Constipation	21.2 (22.5)	21.2 (27.0)	6.1 (20.1)	2.34	0.12	—
Diarrhoea	18.2 (22.9)	6.1 (13.5)	18.2 (31.1)	1.16	0.33	—
Financial difficulties	27.3 (32.7)	30.3 (37.9)	24.2 (36.8)	0.41	0.67	—
QLQ BR-23 <sup>a</sup>						—
Body image	44.7 (26.4)	59.9 (28.3)	59.1 (24.6)	2.29	0.13	—
Future perspective	24.2 (26.2)	39.4 (29.1)	24.2 (26.2)	0.76	0.48	—
Systematic therapy side effects	29.9 (18.9)	27.3 (21.0)	21.7 (17.6)	0.72	0.50	—
Breast symptoms	22.7 (22.1)	22.7 (20.4)	21.2 (16.8)	0.11	0.90	—
Arm symptoms	26.3 (20.7)	24.2 (26.2)	23.2 (24.1)	0.12	0.89	—

<sup>a</sup>Sexual functioning, Sexual enjoyment, and Upset by hair loss were deleted because only a small proportion of the subjects responded to these subscales (Responses, sexual functioning;  $n = 2$ , sexual enjoyment;  $n = 2$ , upset by hair loss;  $n = 5$ ).

## Discussion

This is the first study to investigate the feasibility of a novel psychosocial intervention program designed to overcome issues of under-recognition and under-treatment of clinically manifested psychological distress often experienced by cancer patients. In addition, for the first time the present study focused on the breast cancer patients after their first recurrence as subjects because of their potentially high and prevalent psychological distress.

In this study, more than 80% of the eligible subjects accepted and participated in the intervention program and also more than 80% of the enrolled participants completed the program. Regarding the participation rate of psychosocial intervention, one previous Japanese study investigating participation in psychosocial group intervention indicated that only 50 (33%) of 151 primary breast cancer patients after surgery actually participated in the group psychotherapy intervention and they suggested the level of participation is lower than in Western countries [39]. The authors suggest several possibilities for the lower level of Japanese psychosocial intervention program and one of them may be due to cross-cultural difference, namely that discussing personal problems with someone outside of the family may bring a deep sense of shame in Asian countries [39]. While we should understand that the difference rate

of participation did not result from only the difference of intervention itself (e.g. difference of the subject, study design, etc.), nevertheless these findings suggest that the program, especially the individually tailored style, seems to be highly feasible for recurrent breast cancer patients in Japan. In addition, the adherence rate was also high, which also suggests the high clinical feasibility of the program. These findings suggest that the current modality of the intervention program is feasible and accessible for cancer patients.

The psychiatrists at residency level consumed approximately 84 hours and the faculty psychiatrists did 44 hours for the program, which means that the time taken covered and cared for 50 consecutive breast cancer patients after their recurrence. Concerning appropriate early detection of psychological distress, the brief and repeated screening procedure functioned well as all of the 'Cases' were screened as positive. Although it is not simple to judge cost effectiveness of this kind of intervention, the current findings about the amount of time consumed, including the actual treatment after the brief screening and the supervision for this study, suggest the cost effectiveness of the program.

While the current study design does not allow us to address the precise usefulness of the intervention program for psychological distress experienced by cancer patients, several informative findings were obtained. Among them all, the fact that the proportion of clinical psychiatric diagnoses,

including mainly depressive disorders, and psychological distress measured by self-reported questionnaires, such as POMS and IES-R can be decreased in the longitudinal course may be promising because our previous findings and the meta-analytical study suggest that psychological distress, especially depression experienced by cancer patients does not improve spontaneously during at least 6 months or one year after cancer diagnosis [4,40,41]. In addition, when target symptoms focused on adjustment disorders and major depression, the previous study failed to show any effectiveness of an antidepressant treatment and there has been no other proven strategy for alleviating these common psychiatric disorders among cancer patients [42]. This multifaceted intervention program may be one promising approach to manage common psychiatric disorders experienced by cancer patients and the current findings warrant a further well-designed study, including randomized controlled clinical trials. On the other hand, most of the quality of life measures were not significantly changed in the present study. Because the current intervention program did not primarily aim at improving the quality of life itself, the findings obtained may not be unexpected. However, when the primary aim is the improvement of the overall quality of life among cancer patients, this multifaceted psychosocial intervention program may not be enough to accomplish the purpose. In that case, additional intervention, such as more powerful and variable intervention components provided by multidisciplinary medical staff and/or additional resources may be needed. It may be important to note that the interventions might help some probable cases or cases at risk other than 'Cases'. Because our previous study indicated that intensive management of a sub-clinical level of anxiety and depression can contribute to the prevention of subsequent clinically manifested psychological distress among advanced cancer patients [43], this procedure may play a role of prevention for developing clinical psychiatric disorders. These findings also warrant further well-designed controlled clinical trials.

The present study has several limitations. First, the small sample size may be one problem and we may have missed some substantive changes (type II error). Second, since the study was conducted in one institution, institutional bias may be another problem and generalizability of the current findings may thus be limited. Third, because the intervention program had a multi-component structure, we cannot know the specific role and/or effectiveness of each part of the intervention. Fourth, because the study lacked a controlled arm, we cannot precisely discern the actual effectiveness of the program from the regression towards the mean, natural course or placebo effect. Finally, because this study focused on patients with recurrent breast

cancer, the results may not be applicable to patients with cancer in other foci.

Despite the several limitations of the study, the current findings suggest that this novel intervention program which involves screening for psychological distress and sequentially provided actual psychosocial support may be feasible and one promising intervention strategy for reducing clinical psychological distress experienced by cancer patients and further studies to investigate the effectiveness are warranted.

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## Preferences of cancer patients regarding the disclosure of bad news

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### Abstract

To understand patients' preferences regarding the disclosure of bad news is important in the clinical oncology setting. The aim of this study was to clarify descriptively the preferences of cancer patients. Five hundred and twenty-nine Japanese cancer outpatients were surveyed regarding their preferences regarding the disclosure of bad news, and several psychosocial and medical demographic variables were analyzed. In a descriptive analysis, more than 90% of the patients strongly preferred to discuss their current medical condition and treatment options with their physician and to have their physicians take the feelings of their family into consideration as well. While half of the patients preferred to receive information regarding their life expectancy, 30% preferred not to receive it. Multiple regression analyses indicated the preferences showing interindividual variations were associated with the level of education and the mental adjustment to cancer scores. A factor analysis revealed four preferences factors: method of disclosure of the bad news, provision of emotional support, provision of additional information, and setting. These four factors had good internal consistency reliability (Cronbach's alpha = 0.93–0.77). Providing emotional support, including the desire for the physician to show consideration for the patient's family, and understanding an individual's communication preferences may be useful for promoting patient–physician communication. Copyright © 2006 John Wiley & Sons, Ltd.

**Keywords:** patients' preference; bad news; communication; cancer; patient–physician relationship

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### Introduction

Bad news consists of any information likely to alter drastically a patient's view of his/her future [1] and includes information regarding diagnosis, recurrence, and treatment failure in clinical oncology settings. The communication skills of physicians delivering bad news about cancer can affect the degree of a patient's distress [2–4]. However, the majority of physicians do not have a standard strategy for delivering bad news to patients [5]. Furthermore, the majority of guidelines and interventions designed to enhance physicians' communication skills when delivering bad news, are based only on experts' opinions and do not have a strong theoretical basis [6,7], nor do they necessarily reflect the preferences of patients [8,9]. Consequently, enhanced communication skills do not

always improve patients' experience [10]. Meanwhile, patients preferred communication features were linked with lower psychological distress and higher satisfaction levels [3]. Thus, future development of interventions in enhancing communication should include the patients' preferences and the theoretical framework of them [3,7]. However, information on the communication preferences of patients is insufficient, and present communication styles are restrictive and based on the opinions of experts.

Since the importance of providing individualized communication to patients has been recognized, medical and psychosocial predictive variables have been examined to determine their associations with patients' preferences [8,9,11]. In the US, [9] had surveyed cancer patients' preference when receiving their cancer diagnosis and suggested that patients'

preferences consisted of three factors, the content, support, and facilitation, which were associated with sex, age, and education. For physicians to tailor their communication style to individual patients, predictive variables for individual item of, rather than just factors of communication preferences, must be examined. Little attention, however, has been paid to this approach.

Cultural as well as social variables pertaining to both the patient and the physician determine the physicians' communication style. Many cultural aspects concerning the patient-physician relationship in oncology settings differ between Western and Asian countries [12,13]; for example, family-centered decision-making processes, the use of euphemisms, and physician paternalism are more common in Japan [14,15].

The accumulation of further study results on the cancer patients' preferences may help to refine current guidelines and establish patient-preference-based recommendations for dealing with this challenging task. Thus, the purpose of this study was to clarify patients' preferences regarding the disclosure of bad news concerning their cancer. To achieve this purpose, the present study assessed descriptive data, to explore the components of patients' preferences, and to identify the variables associated with communication style preferences. A self-reported questionnaire was utilized to identify patients' desires regarding their physicians' communication style when delivering bad news; this questionnaire was based on previously conducted in-depth interviews with patients and their physicians [15].

## Materials and methods

### Patients

All the subjects were cancer outpatients who were attending follow-up medical appointments at the National Cancer Center (NCC) Hospital East in Japan, which treat mainly breast, digestive, head and neck, and lung cancer. The eligibility criteria were: patients who were deemed by their physician and their medical chart to have received bad news regarding cancer three or more months earlier, including news of diagnosis, recurrence, disease progression, or the absence of an active anticancer treatment; patients who were 20 years old or older; patients who were judged by their physician to be capable of completing the survey; and patients who were capable of understanding spoken and written Japanese.

### Procedure

The Institutional Review Board and the Ethics Committee of the NCC, Japan approved this

study, and each patient provided an informed written consent.

All eligible outpatients were consecutively invited to participate in the study after their follow-up medical visit. The patients completed a series of questionnaires, and mailed them back. If the questionnaires contained any blanks, a single attempt was made to obtain the missing information by telephone or post.

### Measurements

*Patients' preferences regarding the communication style of physicians delivering bad news about cancer.* The preference questionnaire consisted of 70 communication styles of physicians disclosing bad news about cancer. The survey items were generated on the basis of previously conducted in-depth interviews with patients and their physicians [15], a systematic literature review, and discussions among authors, and included a broad range of communication styles. The instrument was piloted among 12 cancer patients. These patients responded to each item and provided feedback on the content, clarification, and format of the items. Minor revisions were made in response to their feedback.

The participants were asked to choose the responses that best reflected how they would like to be told if they were to receive bad news, such as the diagnosis of cancer, recurrence, or progression of cancer (scored on a five-point Likert scale; 1: strongly do not prefer-5: strongly prefer).

*Demographic and medical characteristics.* The questionnaire included demographic data, including age, sex, employment status, education, marital status, and social support. Medical data, such as the type of cancer, recurrence or metastasis, current anticancer treatment, received bad news, and the period after the latest bad news, were obtained from the patients' medical records.

*Mental Adjustment to Cancer (MAC) scale* [16]. The Japanese version of the MAC scale [17] is a standardized instrument for evaluating the adjustment of patients to their cancer. The MAC scale consists of 40 items in 5 subscales: fighting-spirit (16 items), anxious-preoccupation (nine items), helplessness-hopelessness (six items), fatalism (eight items), and avoidance (one item). Each item is rated on a 4-point Likert scale (1-4).

*Hospital Anxiety and Depression Scale (HADS)* [18]. The Japanese version of the HADS [19] is a standardized instrument for evaluating anxiety and depression. The HADS consists of 14 items in 2 subscales: anxiety and depression. Each item is rated on a 4-point Likert scale (0-3).



### Data analysis

First, we assessed the distribution of the patients' responses for all the 70 items in the questionnaire. Second, we grouped the five response categories into three categories: 'prefer', 'do not prefer', and 'no preference either way'. The items for which more than 20% of the respondents chose both 'prefer' and 'do not prefer' were arbitrarily defined as communication style preferences with high interindividual variations. We performed multiple regression analyses configured using the stepwise method to investigate associations with demographic characteristics, medical characteristics, and psychological status as independent variables, and communication styles with interindividual variations as dependent variables. Third, we performed an explanatory factor analysis using the maximum-likelihood method with promax rotation to identify potential components of the patients' preferences, because we did not have any hypothesis. Four factors were adopted on the basis of a screeplot (the eigenvalues of 3-, 4-, 5-, 6- and 7-factor were 4.68, 2.67, 1.98, 1.70,

and 1.45, respectively) and interpretable, and the Cronbach's alpha value was calculated to evaluate the internal consistent reliability of each factor. Significance was defined as  $p < 0.05$ . SPSS software, version 12.0, was used to perform the statistical analysis.

## Results

### Patients

One thousand and fifty-six consecutive outpatients were screened for inclusion. Of the 656 patients who were eligible, 34 refused the approach, 15 could not be contacted, and 32 were lost to contact. Of the remaining 575 patients who were approached, 9 refused to participate and 529 (93.5%) returned the questionnaire. Overall, 80.6% (529/656) of the eligible patients participated in the present study. The demographic characteristics of the participants are listed in Table 1.

**Table 1.** Demographic characteristics of the subjects ( $N = 529$ )

		N	%
Age (years; mean, S.D. range)		62, 11, 26-97	
Sex	Male	274	51.8
	Female	255	48.2
Employment status	Employed	190	35.9
	Unemployed	339	64.1
Marital status	Married	452	85.4
	Unmarried	77	14.6
Household size	Living alone	19	3.6
	2 or more	510	96.4
Education	9 or less years	98	18.6
	10 or more years	430	81.4
Cancer site	Digestive	185	34.7
	Breast	125	23.5
	Head and neck	112	21.2
	Lung	107	20.2
Recurrence or metastasis	Presence	299	56.6
	Absence	229	43.4
Treatment received	Surgery	426	80.5
	Chemotherapy	221	41.8
	Radiation therapy	153	28.9
	Hormone therapy	45	8.5
	Other	16	3.0
Current anticancer treatment	Presence	134	25.5
	Absence	395	74.5
Bad news received regarding			
Diagnosis	Yes	529	100
	No	0	0
Recurrence	Yes	164	31.0
	No	365	69.0
Disease progression	Yes	38	7.0
	No	491	93.0
Absence of active anticancer treatment	Yes	1	0.2
	No	528	99.8



**Table 2.** Descriptive data on patients' preferences for communication when receiving bad news ( $N = 529$ )

Item	Mean	SD	Strongly	Prefer	No preference	Do not	Strongly do
			prefer	%	either way	prefer	not prefer
			%	%	%	%	%
Telling the treatment plan	4.53	0.58	56.5	40.8	2.1	0.4	0.2
Assuming responsibility for your care until the end	4.51	0.59	55.6	41.0	2.6	0.8	0.0
Answering your questions	4.49	0.52	49.5	49.7	0.8	0.0	0.0
Telling about the latest treatment	4.49	0.63	54.4	41.4	3.0	0.8	0.4
Breaking bad news in a way that is easy to understand	4.43	0.54	45.6	52.4	2.1	0.0	0.0
Telling about all treatment options available to you	4.42	0.69	51.0	42.2	4.7	1.9	0.2
Explaining the status of your illness	4.40	0.56	42.9	54.4	2.1	0.6	0.0
Breaking bad news honestly	4.35	0.58	38.9	57.7	2.6	0.6	0.2
Telling what you can hope for	4.35	0.64	43.3	49.1	7.0	0.4	0.2
Explaining until you are satisfied	4.34	0.63	41.4	52.2	5.3	1.1	0.0
Telling the recommended treatment	4.33	0.61	39.1	56.0	3.8	1.1	0.0
Explaining the risks and side effects of treatment	4.33	0.75	44.8	48.4	2.5	4.0	0.4
Explaining the progression of disease	4.31	0.61	37.4	58.0	2.8	1.7	0.0
Using actual images and test data	4.30	0.70	41.0	51.0	5.1	2.6	0.2
Communicating clearly the main points of bad news	4.28	0.62	34.8	60.9	2.5	1.5	0.4
Telling the prospects of cancer cure	4.28	0.65	37.1	55.0	6.8	0.9	0.2
Explaining the symptoms	4.27	0.59	32.7	62.8	3.2	1.1	0.2
Checking to see that you understand	4.24	0.74	36.3	55.6	4.9	1.9	1.3
Taking sufficient time	4.23	0.74	38.4	48.6	10.8	2.1	0.2
Breaking bad news in detail	4.22	0.79	39.1	49.0	7.0	4.5	0.4
Breaking bad news in precise terms	4.17	0.72	30.2	60.9	7	4.5	0.4
Telling in a way with hope	4.17	0.74	33.1	54.4	10.2	1.3	0.9
Talking gently.	4.16	0.76	33.8	52.0	11.3	2.1	0.8
Being a trusting physician	4.14	0.77	33.3	50.7	13.2	2.3	0.6
Breaking bad news in a sympathetic manner	4.11	0.76	31.2	52.7	12.7	3.0	0.4
Discussing your everyday life and work in the future	4.11	0.71	28.2	56.7	12.7	2.5	0.0
Giving papers that physician referred to	4.10	0.79	30.6	54.1	10.6	4.0	0.8
Showing the same concern for your family as for you	4.10	0.73	29.1	55.0	13.2	2.3	0.4
Breaking bad news in a courteous manner	4.09	0.75	29.3	53.7	13.6	3.4	0.0
Breaking bad news in a private setting	4.09	0.78	31.0	50.1	16.4	1.5	0.9
Telling with concern for your feelings	4.04	0.89	31.0	50.9	11.2	5.1	1.9
Breaking bad news in a setting with family	4.02	0.82	28.9	49.1	17.4	4.0	0.6
Telling all the bad news	3.99	0.85	27.4	51.8	13.6	6.6	0.6
Writing on paper to explain	3.98	0.88	27.6	51.8	13.4	5.7	1.5
Saying, 'Let's fight this together'	3.96	0.78	24.2	51.2	21.6	2.5	0.6
Speaking words of encouragement	3.96	0.82	25.3	50.7	19.5	3.6	0.9
Providing information on services and support	3.96	0.73	21.4	56.9	19.1	2.1	0.6
Looking at your eyes and face	3.94	0.84	23.0	55.4	15.7	4.1	1.7
Explaining a second opinion	3.93	0.85	26.5	45.7	23.3	3.8	0.8
Checking questions	3.91	0.83	22.1	54.3	17.4	5.3	0.9
Accepting your expressing emotions	3.89	0.77	20.2	53.1	21.9	4.7	0.0
Saying, 'You're OK'	3.86	0.86	22.7	47.3	23.8	5.5	0.8
Saying words that soothe your feelings	3.79	0.80	16.3	53.1	25.5	4.0	1.1
Saying words to prepare mentally	3.78	0.79	15.5	53.5	25.5	4.7	0.8
Giving specialized medical information	3.74	0.85	16.1	50.1	27.2	4.9	1.7
Physician deciding on the method of treatment	3.68	0.97	16.8	52.4	13.6	16.3	0.9
<i>Answering your questions about alternative medicine</i>	3.66	0.94	15.7	49.0	24.4	7.9	3.0
Ensuring that the telephone does not ring	3.62	0.92	16.8	39.5	35.5	5.5	2.6
Telling frequent questions	3.44	0.92	10.6	39.5	35.7	11.7	2.5
Asking how much you know about your illness before breaking bad news	3.44	0.84	7.4	43.5	36.3	11.3	1.5
Breaking bad news using euphemisms	3.42	0.98	11.3	39.5	32.3	13.0	3.8
<b>Telling about your life expectancy</b>	<b>3.28</b>	<b>1.18</b>	<b>14.7</b>	<b>35.7</b>	<b>19.7</b>	<b>22.7</b>	<b>7.2</b>
Not using the word 'cancer' repeatedly	3.23	0.86	7.4	26.1	51.6	12.1	2.8
Telling how to obtain information (e.g. books or the Internet)	3.22	0.94	8.1	28.9	44.0	14.6	4.3
<b>Breaking bad news in a matter-of-fact manner</b>	<b>2.90</b>	<b>1.09</b>	<b>5.3</b>	<b>29.7</b>	<b>23.3</b>	<b>33.1</b>	<b>8.7</b>
<b>Breaking bad news step-by-step</b>	<b>2.84</b>	<b>1.12</b>	<b>7.2</b>	<b>24.6</b>	<b>21.9</b>	<b>37.2</b>	<b>9.1</b>
Other caregivers attending (e.g. other physicians, or nurses)	2.79	0.90	2.8	14.7	50.1	23.6	8.7
<b>Talking in a decisive tone of voice</b>	<b>2.65</b>	<b>0.97</b>	<b>3.2</b>	<b>17.4</b>	<b>28.9</b>	<b>42.0</b>	<b>8.5</b>
<b>Breaking bad news before it is definite</b>	<b>2.60</b>	<b>1.06</b>	<b>2.8</b>	<b>24.0</b>	<b>14.7</b>	<b>46.9</b>	<b>11.5</b>
Breaking bad news only to you	2.33	0.97	2.3	10.8	23.4	45.2	18.3

Table 2. (continued)

Item	Mean	SD	Strongly prefer	Prefer	No preference either way	Do not prefer	Strongly do not prefer
			%	%	%	%	%
Touching your hand or shoulder	2.31	0.85	0.8	5.9	34.6	41.2	17.6
Talking at physician's pace	2.20	1.02	1.1	13.2	17.2	41.8	26.6
A physician at the first meeting breaking bad news	2.18	0.97	1.3	8.5	24.0	39.5	26.7
Breaking bad news to your family first	2.15	0.91	1.5	6.0	22.7	45.7	24.0
Using technical words	2.13	0.81	1.7	9.8	15.4	45.4	27.5
Telling only bad news	2.01	0.91	0.8	8.3	12.5	48.2	30.1
Talking in a business-like manner	1.99	0.80	0.2	5.3	14.4	53.3	26.8
Breaking bad news by telephone	1.68	0.73	0.4	2.3	6.6	46.3	44.4
Dealing with your questions in an irritated manner	1.43	0.55	0.0	0.2	2.1	38.0	59.7
Breaking bad news in a vague manner	1.37	0.59	0.4	0.8	0.9	31.8	66.2

Bold: The items for which more than 20% of respondents chose both prefer or strongly prefer and do not prefer or do not.

Table 3. Variables associated with communication styles with interindividual variations (N = 526)

Independent variables	Beta	P	R	R <sup>2</sup>	Adjusted R <sup>2</sup>
Telling about your life expectancy.				0.034	0.028
Marital status (No/yes) <sup>a</sup>	0.132	0.003	0.131		
Helplessness/hopelessness	-0.097	0.027	-0.096		
Education (Year)	0.089	0.047	0.087		
Breaking bad news in a matter-of-fact manner				0.112	0.104
Age (Year)	0.163	<0.001	0.153		
Education (Year)	0.161	<0.001	0.158		
Fatalism	0.144	0.003	0.129		
Anxious preoccupation	-0.130	0.004	-0.125		
Recurrence or metastasis (No/yes) <sup>a</sup>	0.086	0.048	0.087		
Breaking bad news step-by-step				0.112	0.103
Fighting spirit	0.153	<0.001	0.153		
Education (Year)	-0.150	<0.001	-0.153		
Employment status (No/yes) <sup>a</sup>	-0.122	<0.001	-0.125		
Avoidance	0.121	0.006	0.121		
The number of received bad news (0-4)	0.097	0.020	0.102		
Breaking bad news before it is definite				0.030	0.024
Avoidance	0.119	0.007	0.118		
Education (Year)	0.098	0.026	0.097		
Breast cancer (No/yes) <sup>a</sup>	-0.086	0.048	-0.086		
Talking in a decisive tone of voice				0.050	0.044
Sex <sup>b</sup>	-0.169	<0.001	-0.168		
Fatalism	0.099	0.027	0.097		
Education (Year)	-0.091	0.042	-0.089		

<sup>a</sup> Coded as 0 = no, 1 = yes.

<sup>b</sup> Coded as 0 = male, 1 = female.

**Communication styles preferred by most patients and communication style preferences with interindividual variations**

Descriptive data of each item are shown in Table 2. The communication styles preferred by most patients were as follows: physicians should discuss their treatment with them and establish a rapport with them. On the other hand, some communication styles were not preferred by most patients. For example, physicians deal with patients' questions in an irritated manner and break bad news in a vague manner. Furthermore, the communication style preferences with interindividual variations were as follows: the desire for information regarding the

patient's life expectancy, the desire to receive bad news in a matter-of-fact manner, the desire to receive bad news gradually, the desire to receive bad news in a decisive tone of voice, and the desire to receive bad news even before diagnosis is definite.

**Variables associated with communication style preferences with interindividual variations**

Table 3 lists the multiple regression models for each item which exhibited high interindividual variations (indicated in bold in Table 2). Three participants were excluded from this statistical analysis because of missing data. Married patients,

patients with less helplessness/hopelessness, and patients with more formal education preferred to talk about their life expectancy with their physicians. Older patients, patients with more formal education, patients with more fatalism and less anxious preoccupation, and patients with recurrence or metastasis preferred that their physicians break the bad news in a matter-of-fact manner. Patients with more fighting spirit, less formal education, employed patients, patients with more avoidance, and patients who received a more large number of bad news preferred that their physicians break the bad news in a step-by-step manner. Patients with more avoidance, patients with more formal education, and patients with breast cancer preferred that their physicians break the bad news before a definite diagnosis had been made. Female patients, patients with more fatalism, and patients with less formal education preferred that their physicians talk in a decisive tone of voice.

#### Components of the patients' preferences regarding the communication style of the physicians disclosing bad news about cancer

The results of the exploratory factor analysis yielded four components (Table 4). The correlation coefficients between each factor were weak to moderate ( $r = -0.20-0.50$ ). Factor 1: Method of disclosure of bad news (21 items, variance explained = 9.81, alpha coefficient = 0.93). This factor pertained to how physicians delivered bad news to patients during consultations. Factor 2: Provision of emotional support (17 items, variance explained = 7.77, alpha coefficient = 0.88). This factor covered the supportive aspects of the communication and included offering comfort and support to the patient. Factor 3: Provision of additional information (15 items, variance explained = 5.17, alpha coefficient = 0.82). This factor dealt with the additional information delivered by physicians during consultations while breaking bad news. Factor 4: Setting (17 items, variance explained = 10.23, alpha coefficient = 0.77). This factor focused on the fundamental communication skills of the physicians while delivering bad news.

#### Discussion

The communication styles preferred by the majority of the patients might be recommended to physicians delivering bad news to patients; physicians should deliver both positive (e.g. treatment plan and what patient can hope for) and negative (e.g. risk and side effect of treatment) information pertaining to the disease and its treatment and should also adopt a supportive attitude. Continuing physician responsibility for patient care and

future treatment plans were the most preferred attitudes and vagueness was the least preferred attitudes from the patients' perspectives. These findings suggest that engagement between the patients and their physicians is important when bad news is being broken.

Not all but many of the items pertaining to the communication styles preferred by most patients were consistent with those published in previous general guidelines and recommendations, for example, discussion of the possible treatment options with the patient, provision of warning signals, and delivery of the diagnosis to the patient honestly and in simple language, but not bluntly [20,7]. However, some of the items preferred by most patients or with high interindividual variations were not consistent with previously published guidelines and recommendations. For example, only 6.7% of patients wanted their physician to touch their hands or shoulders when delivering bad news, although Ptacek and Eberhardt [20] reported the benefit of touch.

Consistent with the findings in the previous report [21], patients responded with a high interindividual variation in preferences for discussing life expectancy. Furthermore, about half of the patients in the present study did not want physicians to deliver bad news step-by-step, a recommended communication style [5]. About one quarter of the patients in the present study preferred communication styles in which physicians delivered the bad news even before the content of the news was definite, a communication style that was not recommended in the previous report [6]. These results suggest the importance of communicating with patients on an individual basis.

Furthermore, while patients preferred to be clearly told of their diagnosis, half of them preferred that physicians use euphemisms and 33.5% of them preferred that physicians do not repeatedly use the word 'cancer'. As we checked on the accuracy of patients' understanding of each item in the pilot survey, we think there is little possibility of misunderstanding the item's meaning. These results do not support the guidelines recommended for using the word 'cancer' and avoiding euphemisms in order not to cause a misunderstanding [7,20]. Japanese physicians use more euphemisms when delivering bad news to patients than Western physicians [13,22], and the word, 'cancer' might have a psychologically invasive impact on patients with cancer in Japan. Therefore, the use of euphemisms may give patients the impression that their physician is supporting them emotionally; these items were included in the emotional support factor.

Interestingly, 84% of the patients preferred to have their physicians show the same concern for the feelings of their family as for themselves. This

**Table 4.** Components of the patients' preferences for communication when receiving bad news: a factor analysis ( $N = 529$ )

Factor 1: Method of disclosure of bad news	Factor loading
Breaking bad news honestly	0.757
Breaking bad news in a way that is easy to understand	0.719
Explaining the progression of disease	0.704
Explaining the status of your illness	0.670
Telling all the bad news	0.666
Breaking bad news in precise terms	0.660
Explaining the symptoms	0.644
Communicating clearly the main points of bad news	0.612
Using actual images and test data	0.593
Telling the recommended treatment	0.584
Explaining until you are satisfied	0.563
Breaking bad news in detail	0.556
Answering your questions	0.547
Breaking bad news in a courteous manner	0.542
Giving papers that physician referred to	0.524
Being a trusting physician	0.454
Assuming responsibility for your care until the end	0.422
Writing on paper to explain	0.405
Telling the prospects of cancer cure	0.404
Looking at your eyes and face	0.380
Telling about your life expectancy	0.363
Factor 2: Provision of emotional support	
Saying words that soothe your feelings	0.675
Saying, 'You're OK'	0.673
Saying, 'Let's fight this together'	0.667
Telling in a way with hope	0.662
Talking gently	0.609
Speaking words of encouragement	0.599
Telling what you can hope for	0.560
Saying words to prepare mentally	0.542
Breaking bad news in using euphemisms	0.525
Breaking bad news in a sympathetic manner	0.473
Showing the same concern for your family as for you	0.455
Breaking bad news step-by-step	0.421
Telling with concern for your feelings	0.394
Accepting your expressing emotions	0.380
Checking questions	0.309
Breaking bad news in a setting with family	0.294
Not using the word 'cancer' repeatedly	0.263
Factor 3: Provision of additional information	
Telling the treatment plan	0.543
Telling about all treatment options available to you	0.532
Telling about the latest treatment	0.513
Explaining the risks and side effects of treatment	0.490
Explaining a second opinion	0.481
Giving specialized medical information	0.478
Taking sufficient time	0.472
Telling frequent questions	0.447
Telling how to obtain information (e.g., books or the Internet)	0.434
Checking to see that you understand	0.434
Talking about alternative medicine	0.431
Providing information on services and support	0.386
Breaking bad news in a private setting	0.385
Discussing your everyday life and work in the future	0.349
Asking how much you know about your illness before breaking bad news	0.297
Factor 4: Setting	
Breaking bad news by telephone.	0.639
Telling only bad news	0.573

**Table 4.** (continued)

Talking at physician's pace	0.549
Dealing with your questions in an irritated manner	0.545
Breaking bad news in a vague manner	0.524
A physician at the first meeting breaking bad news	0.488
Talking in a business-like manner	0.475
Using technical words	0.447
Breaking bad news in a matter-of-fact manner	0.420
Talking in a decisive tone of voice	0.416
Touching your hand or shoulder	0.391
Breaking bad news only to you	0.388
Breaking bad news your family first	0.361
Physician deciding on the method of treatment	0.322
Breaking bad news before it is definite	0.320
Providing information on services and support	0.301
Ensuring that the telephone does not ring	-0.232

finding might be related to the distress experienced by the families of cancer patients after diagnosis, treatment, or the appearance of adverse effects [23]. Another explanation for this finding might be related to Asian culture. In Japan, families and physicians have been accorded a larger role in clinical decision making, and a patient's family is usually informed of an incurable cancer diagnosis before the patients has been notified [12]. That is to say, the family might experience distress before the patient does. Therefore, patients might desire for their physicians to show concern for the feelings of their family.

In the present study, 78% of the patients preferred to be with their family when the bad news was being broken and 14% of the patients preferred to receive bad news at their physicians' pace. Although some previous studies in Western countries have recommended that bad news should be delivered at the patients' pace to increase the patients' sense of control, physicians should recognize that many Japanese cancer patients prefer to play a collaborative role in the decision making process, rather than assuming active and passive roles, and will respect the physician's opinion even if the physician's recommendation conflicts with their own wishes [14].

This study also showed that 85% of patients preferred not only to discuss the bad news but also to talk about the impact of their disease on their daily activities, the information of a second opinion (72.2%), and complementary and alternative medicine (64.7%), although previous studies have not adequately addressed whether other information should be given by physicians to patients during the consultation. Physicians might be encouraged to discuss such matters with their patients.

Previous studies [8,9,11] reported that age, sex, level of education, and medical condition are significantly associated with preferred communication styles. In the present study, marital status, employment status, psychological adjustment,